# Additional CH2M HILL Review Comments on the OU2 RI/FS Work Plan

December 9, 2013

## Exposed Waste at Surface

The Operable Unit 2 (OU2) Remedial Investigation/Feasibility Study (RI/FS) Work Plan proposes to characterize waste exposed at the ground surface in OU2 and perform a risk assessment, presumably for the purpose of leaving exposed waste in place if the risks are acceptable. CH2M HILL did not identify any Ohio regulations that specifically prohibit leaving exposed waste at landfills. However, consideration should also be made for the State of Ohio requirements for closure and post-closure care of landfills (Ohio Administrative Code [OAC] 3745-27) which were identified as applicable ARARs (rather than relevant and appropriate) for OU1. This requirement indicates that waste management activities that occurred at the South Dayton Dump site were not exempt based on either the date or manner of disposal at South Dayton Dump site. It is reasonable to assume that the waste exposed at the surface in OU2 would have been disposed of in the same timeframe and manner as that associated with OU1 disposal activities. Therefore, OU2 is subject to the same rules regarding closure and post-closure care as OU1. OAC 3725-27(5)(C) requires that wastes that have been open dumped be removed or managed either by the person who is responsible for the dumping or by the property owner.

It is important to note that the ARARs that have been established for OU1 may set certain precedents regarding what requirements OU2 will be subject to, even though OU2 is being assessed through a complete RI/FS, unlike OU1's presumptive remedy. Specifically referring to Ohio Revised Codes 6111.04, 3767.13 (B) and (C), and 3767.14, which include broad prohibitions of waste discharges that may cause pollution of waters of the state or that are a nuisance. Exposed waste at the ground surface could serve as a source to surface water or groundwater, which would conflict with this prohibition.

A final consideration for sampling the exposed waste is that the random disposal pattern that is present at the site indicates that contaminant distribution and sample concentrations are heterogeneous. Therefore, a grid-based sampling strategy is not applicable and additional information should be gathered on the spatial distribution of fill and waste. This may significantly increase the number of samples required to prepare a statistically defensible risk assessment, compared to the grid-based approach. See similar comment in the human health and risk assessment (HHRA) section of review comments.

## Statistical – Background Comparison

The Work Plan indicates that the background comparison is being used for two purposes: to define nature and extent and for use in the risk assessment. To evaluate how the data will service these two needs, the following additional details are needed:

a) For the nature and extent, the written discussion should include how the application of individual background statistical background comparisons will be incorporated in the overall

data assessment.

b) For the risk assessment, specify if the background-based decisions be applied to the initial risk screening portion, or if all exceedences of risk screening criteria be carried through the risk assessment and the background comparisons discussed in the uncertainty section of the quantitative risk assessment.

The discussion should explicitly list which constituents will be included in the background comparisons. Also, see other review comment regarding the use of background comparisons for fill material and for exposed waste at the surface.

## Vapor Intrusion / HHRA

The Work Plan proposes no further soil gas sampling but does not provide rationale for its exclusion. The Work Plan should provide discussions of the vapor intrusion (VI) screening that has already been performed (and the results) and how the future VI pathway at onsite and offsite locations will be evaluated, including the following:

- any VI institutional controls that will be implemented
- mitigation systems that will be installed
- sample collection/analysis that will be performed on mitigation systems
- long-term monitoring that will be performed on existing structures
- monitoring that will be performed at the site boundary to evaluate offsite vapor migration

Also consider that the nature and extent of volatile organic compound (VOC) residuals in soil (vadose zone), groundwater, and non-aqueous phase liquid (NAPL) (if present) are still needed so that the conceptual site model for VI can be developed. Without this information, the potential onsite and offsite extent of current and future VI issues cannot be determined and the locations for further VI studies (and/or engineering controls) cannot be identified.